UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/367,630	08/19/1999	YOSHIHIRO SAITO	3045-1222	4583

21888 7590 05/20/2004

THOMPSON COBURN, LLP
ONE US BANK PLAZA
SUITE 3500
ST LOUIS, MO 63101

EXAMINER	
AHMED, SAMIR ANWAR	
ART UNIT	**PAPER NUMBER**
2623	

DATE MAILED: 05/20/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)	
	09/367,630	SAITO ET AL.	
	Examiner	Art Unit	
	Samir A. Ahmed	2623	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *20 February 2004*.

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *11-17, 19, 21-24, 31,34- 35, 38,-39, 43-57* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☒ Claim(s) *16,22 and 46-49* is/are allowed.

6)☒ Claim(s) *11-15,17,19,21,23,24,31,34,35,38,39,43-45 and 50-57* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) Paper No(s)/Mail Date _____.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____ .
5) ☐ Notice of Informal Patent Application (PTO-152)
6) ☐ Other: _____.

1. A request for continued examination under 37 CFR 1.114, including the fee set forth in 37 CFR 1.17(e), was filed in this application after final rejection. Since this application is eligible for continued examination under 37 CFR 1.114, and the fee set forth in 37 CFR 1.17(e) has been timely paid, the finality of the previous Office action has been withdrawn pursuant to 37 CFR 1.114. Applicant's submission filed on 2/20/04 has been entered.

2. The amendment filed 2/20/04 been entered and made of record.

3. Applicant's arguments filed have been fully considered but they are moot in view of new grounds of rejection.

Applicant alleges "As to fig. 30 C, the Office Action [']" (page 18, line 20-page 19, line 5). The examiner disagrees. Firstly, as shown in the previous Office Action and shown again, below, in this Office Action, there is no disclosure that the EEPROM 14 need not to be included on the card K. Secondly, the passage on page 51, lines 27-29, that the data receiving side can transmit registered fingerprint codes to the card K for matching, does not relate to modification discloses on page 51, lines 14-19. as a matter of fact that passage (page 51, lines 27-29 cited by the Applicant) relates to another modification starts on page 51, lines 20-29. Furthermore that passage (page 51, lines 27-29 cited by the Applicant to show that EEPROM 14 and HDD 15 need not to be included on the card K) recites on lines 23-25, "In that case, the EEPROM 14 need not to be present on the data receiving side", i.e. it is present on the data transmitting side (the card K).

Applicant alleges "As to fig. 30 d, the allocation of the encoding program [']" (page 19, lines 6-16). The examiner disagrees. Firstly, as shown in the previous Office Action and shown again, below, in this Office Action, there is no disclosure that the processing used for fingerprint encoding need not to be present in the portable key unit. Secondly, the Applicant is arguing, "a person of ordinary skill in the art would understand that it is preferable to couple the sensor with the encoding program". It appears the Applicant is arguing that the limitation is obvious in view of a person of ordinary skill in the art. However in case of a new matter the question is not whether this limitation is obvious in view of a person of ordinary skill in the art, the question is whether this limitation is clearly disclosed in the original specification.

4. Figs. 30(c), 30(d) have not been approved by the Examiner and are not entered because ***they constitute new matter and are not supported by the originally-filed application*** as set forth below.

Figure 30(c):

Applicant has cited for support the passage from page 51, lines 7-14 which shows a first modification of original Fig. 30 and resulted in modified Fig. 30(b) and then used the passage from page 51, lines 14-19 to further modify the modified Fig. 30(b) to result in Fig. 30(c). The passage from page 51, lines 14-19 states "The system can also be set up in a way", which refers to the original system shown in Fig. 30 which exists in the original specification. By using the passage from page 51, lines 14-19 to modify original Fig. 30, the fingerprint code registration program 19 that exists in the flash memory 11 of the K card is moved to the receiving unit (page 51, lines 17-19) and the

result is a system with EEPROM 14 on both the K card and the receiving unit, fingerprint code preparation program 17, fingerprint matching program 18 on the K card and fingerprint code registration program 19 on the receiving unit. Fig. 30 C have to show EEPROM 14 on both the K card and the receiving unit because there is no disclosure or suggestion in the passage from page 51, lines 14-19 to remove the EEPROM 14 from the K card and it is clear that the intended system for the modification is the original system of Fig. 30. Furthermore while Applicant has used the passage from page 51, lines 14-19 to further modify the system that is resulted from modifying original Fig. 30 using the passage from page 51, lines 7-14 and not modifying original Figure 30, the Applicant has used the passage from page 51, lines 20-25 which also states "The system can also be set up in such a way" (same as stated by the passage from page 51, lines 14-19) to modify the original Fig. 30 which resulted in modified Fig. 3(e). In case of Fig. 30(e) Applicant modified original Fig. 30 and did not modify Fig. 30(b) as he did for Fig. 30(c), Applicant cannot selectively modifying the Figures, any modification should be for original Fig. 30 because the specification as originally filed is disclosing some possible modifications to original Fig. 30 and there is no suggestion for otherwise.

Figure 30(d):

Applicant has cited for support the passage from page 52, lines 1-2 which states " the sensor unit A can be on the K or otherwise". While it is true that for any of the three modifications recited on page 51 [the passage from page 51, lines 7-14 (first modification), the passage from page 51, lines 14-19 (second modification), the

passage from page 51, lines 20-25 (third modification) the sensor can be either on the K card or on the receiving unit, it is not clear which one of the above three modifications is used with it's sensor moved from the K card to the receiving unit. Fig. 30(d) does not look like any of the Fig. 30(b) or 30(c) or 30(e). Fig. 30(d) should be similar to either Fig. 30(b) or corrected 30 (c) disclosed above by the Examiner or 30(e) with it's sensor moved to the receiving unit. Applicant states that with the sensor being separated from the portable key unit K, the processing used for fingerprint encoding need not to be present in the portable key unit. The examiner disagrees. The originally filed specification does disclose or suggest such modification. Applicant has to show where this is disclosed in the originally filed specification.

5. The amendment filed 2/20/04 is objected to under 35 U.S.C. 132 because it introduces new matter into the disclosure. 35 U.S.C. 132 states that no amendment shall introduce new matter into the disclosure of the invention. The added material, which is not supported by the original disclosure, is as follows: Figs. 30(c), and 30(d) the amendment to the specification on page 2, lines 1-4 of that amendment.

Applicant is required to cancel the new matter in the reply to this Office Action.

Claim Rejections - 35 USC § 112

6. The following is a quotation of the first paragraph of 35 U.S.C. 112:

> The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.

7. Claims 11-15, 17, 34, 35, 43, 19, 21, 31, 23-24, 38-39, 44-45, are rejected under 35 U.S.C. 112, first paragraph, as containing subject matter which was not described in

the specification in such a way as to reasonably convey to one skilled in the relevant art that the inventor(s), at the time the application was filed, had possession of the claimed invention.

Claim 11, recites "said portable key unit comprises one of the group of consisting of: (2) said sensor and said processor but not said semiconductor memory device and not said control unit and wherein said portable unit is in communication with said semiconductor memory device and said control unit via wireless communication", lines 18-21, (3) said processor but not said sensor not said semiconductor memory device and not said control unit and wherein said portable unit is in communication with said sensor, said semiconductor memory device and said control unit via wireless communication", lines 21-24. There is no disclosure in the specification as originally filed of such a structure or such interactions between the structure elements. The specification should recite a clear concise description of the claimed invention structure and component interactions.

As to claim 19 refer to claim 11 rejection.

Claim 15, recites "said portable key unit comprises said processor but not said sensor not said semiconductor memory device and not said control unit and wherein said portable unit is in communication with said sensor, said semiconductor memory device and said control unit via wireless communication", lines 1-4. There is no disclosure in the specification as originally filed of such a structure or such interactions between the structure elements. The specification should recite a clear concise description of the claimed invention structure and component interactions.

As to claim 45 refer to claim 15 rejection.

Claim 17, recites "said portable key unit comprises said sensor and said processor but not said semiconductor memory device and not said control unit and wherein said portable unit is in communication with said semiconductor memory device and said control unit via wireless communication", lines 1-4. There is no disclosure in the specification as originally filed of such a structure or such interactions between the structure elements. The specification should recite a clear concise description of the claimed invention structure and component interactions.

As to claim 21 refer to claim 17 rejection.

Drawings

1. The drawings are objected to under 37 CFR 1.83(a). The drawings must show every feature of the invention specified in the claims. Therefore, the "limitations in claims 11, 19, 15, 17, 21, 44-45, " (refer to paragraph 7 above) must be shown or the feature(s) canceled from the claim(s). No new matter should be entered.

Claim Rejections - 35 USC § 103

8. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

2. Claims 11-12, 14, 19, 31, 24 are rejected under 35 U.S.C. 103(a) as being unpatentable over the combination of Bowker et al (U.S. Patent 5,963,657), Hsu et al (U.S. Patent 6,182,221) and Tamori (U.S. Patent 5,503,029)

Claims 11 and 19 are a Markush claim (see MPEP 2173.05(h)), the Examiner needs only to meet one member of the group in order to satisfy requirements under 102/103 rejection.

As to claim 11, Bowker disclose a locking device (see Fig. 7) comprising:

(a) a locking mechanism for locking and unlocking movement of an object to be unlocked [solenoid drive 999 for locking and unlocking movement of door 960 (col. 23, lines 8-9, and 20-22, Fig. 7, items 999, 960)];

(b) a fingerprint sensor for detecting a fingerprint pattern (col. 23, lines 37-42);

© a semiconductor memory device for storing registered fingerprint data [EPROM 507 stores authorized-user fingerprint templates (col. 22, lines 50-52, Fig. 6, item 507), the EPROM as shown in Figs 22 and 23-2 is a an IC (integrated circuit) chip which is conventionally made of silicon (semiconductor)];

(d) a processor configured to determine by electronic processing whether the fingerprint data created from the Fingerprint pattern detected by said fingerprint sensor matches with any of the registered fingerprint data stored in said semiconductor memory device (col. 22, lines 50-55);

(e) a control unit for controlling whether said locking mechanism locks or unlocks movement of said object in response to said fingerprint match determination by said processor (col. 22, lines 58-61, col. 23, lines 37-46); and

(f) a unit separated from said locking mechanism, said portable key unit comprises one of the group of: (1) said sensor, said processor, and said semiconductor memory device but not said control unit [Bowker discloses that his analyzer 96 is used for other apparatus, facilities, financial services and information services such as cellular phones and so called "notebook" computers (portable devices where the analyzer 96 will be separated from the control unit 97) (col. 24, lines 50-66) including an identification card (portable key) carried by the user (col. 22, line 66-col. 23, line 1-2), as shown in Fig. 12, the analyzer 96 includes sensor, memory, CPU, and power source].

Bowker discloses that the system is implemented in cellular phones, notebook computers, but does not explicitly disclose, the key unit independently portable with respect to said control unit and said locking mechanism, wherein said portable key unit is in communication with said control unit via wireless communication and that the fingerprint sensor is a pressure-based fingerprint sensor comprising at least a portion of a plurality of ridges and a plurality of valleys of a finger in both an x direction and a y-direction when said finger is pressed against said sensor.

Hsu discloses a small hand held device for automatically verifying the identity of a person seeking access to a protected property such as a door. The device may be integrated in a cellular phone (Fig. 1A). The portable device includes a fingerprint sensor, a processor, reference image storage (memory) and a wireless transceiver (Fig. 2). The portable device communicates with the door actuator 50 (control unit) to perform some desired operation (col. 7, lines 4-10). It would have been obvious to one having ordinary skill in the art at the time the invention was made to use Hsu's teachings to

modify Bowker's device by using a key unit independently portable with respect to said control unit and said locking mechanism, wherein said portable key unit is in communication with said control unit via wireless communication in order to provide automatic secure access to remotely located protected properties such as a door to be accessed remotely using a security portable device which reliably identifies the owner using fingerprint data. Because identification is verified in a small portable device, communication with multiple doors to protected property can be limited to a simple identity confirmation message (col. 4, lines 2-10). Neither Bowker nor Hsu discloses, the fingerprint sensor is a pressure-based fingerprint sensor comprising at least a portion of a plurality of ridges and a plurality of valleys of a finger in both an x direction and a y-direction when said finger is pressed against said sensor.

Tamori discloses an inexpensive surface pressure panel capable of detecting the variations in the pressure due to surface variations (ridges and grooves) of a fingerprint. The pressure sensor is an active matrix type array of having first and second (X and Y) groups of electrodes (col. 2, lines 11-25, col. 4, line 37-col. 5, line 15, Fig. 4). One skilled in the art would have clearly recognized that the optical fingerprint sensor of Bowker's device would have been bulky, expensive and sensitive to the effects of greasiness of the fingertip, moisture (sweat or the like) that would have compromised the accuracy of the detected fingerprint. Therefore, it would have been obvious to one having ordinary skill in the art at the time the invention was made to have used a pressure-based fingerprint sensor that detects a plurality of ridges and a plurality of valleys of a finger in both an x direction and a y-direction when a finger is pressed

against the sensor in the combined device of Bowker and Hsu as taught by Tamori in order to achieve a compact, inexpensive surface pressure fingerprint sensor that is capable of accurately detecting the user's fingerprint (col. 2, lines 32-37) and is not susceptible to the effects of greasiness of the fingertip, moisture (sweat or the like) compared to other conventional fingerprint sensors.

As to claim 12, Bowker further discloses wherein said portable key unit comprises said sensor, said processor, and said semiconductor memory device but not said control unit [Bowker discloses that his analyzer 96 is used for other apparatus, facilities, financial services and information services such as cellular phones and so called "notebook" computers (portable devices where the analyzer 96 will be separated from the control unit 97) (col. 24, lines 50-66), including an identification card (portable key) carried by the user (col. 22, line 66-col. 23, line 1-2), as shown in Fig. 12, the analyzer 96 includes sensor, memory, CPU, and power source] and Hsu further discloses, wherein said portable key unit is in communication with said control unit via wireless communication ((Figs. 1A, 2, and 4).

As to claim 14, Bowker further discloses wherein said portable key unit is a card (col. 22, line 66-col. 23, line 1-2).

As to claim 19, refer to claim 11 rejection for their common features. Bowker further discloses a switching device comprising:

(a) a switch for starting operation of an object [internal relay 519 provides a switch closure to an external relay that provides access to utilization means (door) (Col. 22, lines 58-61, col. 24, lines 39-49, Fig. 12, item 97)];

(e) a processor to (2) actuate said starting switch in response to said fingerprint match determination being positive (col. 24, lines 39-49, Fig. 12, item 94).

As to claim 31, refer to claim 12 rejection.

As to claim 24, refer to claim 14 rejection.

3. Claims 17 and 21 are rejected under 35 U.S.C. 103(a) as being unpatentable over the combination of Bowker et al (U.S. Patent 5,963,657), Hsu et al (U.S. Patent 6,182,221) and Tamori (U.S. Patent 5,503,029) as applied to claims 11 and 19 above and further in view of Katsumi Nagaki et al. [(Japanese Tokkyo Kokai Koho) Patent Application No. 7-14048].

As to claim 17, [as best understood by the examiner] neither Bowker nor Hsu nor Tamori discloses, wherein said portable key unit comprises said sensor, and said processor, but not said semiconductor memory device and not control unit.

Katsumi discloses an electric locking device that locks and unlocks a lock by an installed circuit for personal data of a key owner and by analyzing the data by use of a judging circuit in the lock. Key (portable device) 1 comprises fingerprint image input circuit 6 (CCD element, i.e. sensor) (Fig. 2). The lock comprises a digital controller, a judging circuit connected to the digital controller, data memory and unlocking device for the lock. The judging circuit (matching processor) compares the user's fingerprint with registered data in the data memory, and if it matches the preregistered data, it sends the unlock signal to the unlocking device of the lock (see Fig. 3). Besides the aforementioned embodiment example, a judging circuit (matching processor) may be built in key 1 (i.e., the key has only a sensor and matching processor). It would have

been obvious to one having ordinary skill in the art at the time the invention was made to use Katsumi's teachings to modify the combined device of Bowker, Hsu and Tamori by using a key comprises a fingerprint sensor and a built in judging circuit (matching processor) in order to improve security for controlled entry and exit from certain facilities by judging the user by the key (the key judges the user) and unlock the door only for the one who is related to the key. The key with its sensor and electronic judging circuit (matching processor) can be easily carried around and if it is lost, nobody else can use or retrieve any data from it, which is advantageous.

As to claim 21 refer to claim 17 rejection.

9. Claims 34, 38 are rejected under 35 U.S.C. 103(a) as being unpatentable over the combination of Bowker et al (U.S. Patent 5,963,657) Hsu et al (U.S. Patent 6,182,221) and Tamori (U.S. Patent 5,503,029) as applied to claims 11 and 19 above and further in view of Moses et al. (U.S. Patent 5,503,029).

As to claim 34, Neither Bowker nor Hsu nor Tamori discloses, wherein said processor is further configured to store said sensed fingerprint pattern in said semiconductor memory device in response to said fingerprint match determination being negative.

Moses discloses a security system that controls access from one area to another by reading data on an identification card entered into a reader and measuring the physical characteristics (biometric) of each person passing through, comparing the measured physical characteristics (biometric) with prerecorded physical characteristics (biometric data) of the person to whom the card is issued (col. 1, lines 56-66). The

biometric characteristics measured are height, weight and compared to record profile of the authorized owner of the card. If the comparison certainty is below a certain level (negative match) the computer (processor) stores all data transaction (i.e. the biometric data and other data related to the card) (col. 10, lines 34-49). Fingerprint data, face data, height, and weight are physical characteristics (biometric data) that are known in the art to be used for identification. It would have been obvious to one having ordinary skill in the art at the time the invention was made to use Kinoshita's teachings to modify the combined device of Bowker, Hsu and Tamori by storing the biometric data (fingerprints in this case) in the semiconductor memory when the matching of the biometric data (fingerprint) is negative in order to establish a historical file that shows breaches or violations of the security.

As to claim 38, refer to claim 34 rejection.

4. Claims 35, 39 are rejected under 35 U.S.C. 103(a) as being unpatentable over the combination of Bowker et al (U.S. Patent 5,963,657) Hsu et al (U.S. Patent 6,182,221) and Tamori (U.S. Patent 5,503,029) as applied to claims 11 and 19 above and further in view of Gokcebay (U.S. Patent 5,337,043).

As to claim 35, Neither Bowker nor Hsu nor Tamori discloses, further comprising a clock unit for generating a periodic clock signal and a time determining unit configured to maintain a time value according to said clock signal and identify a time value when the finger is pressed against said sensor, wherein said semiconductor memory device is further configured to store access control data, said access control data identifying when an al-authorized person for whom registered fingerprint data is stored is allowed

to lock or unlock movement of said object, and wherein said processor is further configured such that said locking or unlocking of said object is further dependent upon said processor positively determining from a comparison between said access control data and said identified time value that said authorized person is allowed to lock or unlock movement of said object.

Gokcebay discloses a high security access control system involving credit card type keys or mechanical keys and locks as well as key holder authentication to prevent unauthorized use of the key. A card type key (electronic, magnetic, etc.) carries encoded data which represent a personal feature of the intended key holder assigned to that key, such as a fingerprint (a memory device that stores registered fingerprint code data). The data may be read by swiping it through a reader slot. The information as read is briefly stored in a memory associated with a small processor connected to the key reader. The fingerprint reader scans the fingerprint, and this scanned information is compared with the encoded information. If the actual fingerprint as read matches the fingerprint as encoded and stored on the key, the key holder is granted access (col. 2, lines 5-64). The card type key is used for access control of a door with a lock (see Figs 1, and 3). The access is granted based on both positive matching of the fingerprint and matching of the time and date which the user may validly access the area (see Fig.8). It would have been obvious to one having ordinary skill in the art at the time the invention was made to use Gokcebay's teachings to modify combined device of Bowker, Hsu and Tamori, by granting access only when both the matching of the fingerprint and matching of the time and date which the user may validly access the area are positive in order to,

to provide high security access control based on a personal feature (such as a fingerprint) of the intended key holder assigned to that key and time and date which the user may validly has access, so that access rights can be adjusted or can be canceled for certain personnel (such as discharged employees) (col. 3, lines 16-42).

As to claim 39, refer to claim 35 rejection.

5. Claims 43 and 44 are rejected under 35 U.S.C. 103(a) as being unpatentable over the combination of Bowker et al (U.S. Patent 5,963,657) Hsu et al (U.S. Patent 6,182,221) and Tamori (U.S. Patent 5,503,029) as applied to claims 11 and 19 above and further in view of Sasaki Mitsuyuki et al. (Japanese Patent Application No. 05-263558).

As to claim 43, [as best understood by the Examiner] neither Bowker nor Hsu nor Tamori discloses, wherein said portable key unit comprises said sensor said semiconductor memory device but not said processor and not said control unit.

Sasaki discloses an IC card 1 carried by a person that makes entrance to and exit from a specified area or building, identification information comprising fingerprint identifying the user of the building is stored in memory 1a and a sensor 1d that senses the fingerprint of the user is provided to the IC card (Fig.1, Abstract). It would have been obvious to one having ordinary skill in the art at the time the invention was made to use Sasaki's teachings to modify the combined device of Bowker, Hsu and Tamori by using an IC card (portable key) comprises said sensor said semiconductor memory device in order to improve security for controlled entry and exit from certain facilities by

recognizing persons entering or leaving on the basis of reading fingerprints, and realizes a high degree of security by controlling and closing of the doors of the facilities.

As to claim 44, refer to claim 43 rejection.

10. Claims 50 and 52 are rejected under 35 U.S.C. 103(a) as being unpatentable over the combination of Bowker et al (U.S. Patent 5,963,657) Hsu et al (U.S. Patent 6,182,221) and Tamori (U.S. Patent 5,503,029) as applied to claims 12 and 31 above and further in view of Foster, Jr. ((U.S. Patent 5,668,929).

As to claim 50, Hsu further discloses a wireless communication with the control unit via radio communication (cellular phone) (Fig. 1A). Neither Bowker nor Hsu nor Tamori discloses, wherein said portable key is configured to wirelessly communicate with said control unit via infrared communication.

Foster, Jr. discloses a security device that controls entry to a door for controlled access (col. 3, lines 40-45). The security device includes a fingerprint sensor (col. 4, lines 56-61). Upon recognition of a valid code the processor provide a control signal to unlock the door via radio or infrared link (col. 8, lines 33-41). It would have been obvious to one having ordinary skill in the art at the time the invention was made to use Foster's teachings to modify the combined device of Bowker, Hsu and Tamori by using an infrared communication link in order to provide a bi-directional communication capability so that codes may be changed, new codes for new users added etc., from a remote location (col. 8, lines 44-47).

As to claim 52, refer to claim 50 rejection.

11. Claims 56 and 57 are rejected under 35 U.S.C. 103(a) as being unpatentable over the combination of Bowker et al (U.S. Patent 5,963,657) Hsu et al (U.S. Patent 6,182,221) and Tamori (U.S. Patent 5,503,029) as applied to claims 12 and 31 above and further in view of Setlak et al. (U.S. Patent 5,841,888).

As to claim 56, Neither Bowker nor Hsu nor Tamori discloses, wherein said portable key comprises a plurality of processors.

Setlak discloses a fingerprint device that grants access and uses plurality of parallel processors so that the overall efficiency and operating speed of the apparatus can be increased over conventional apparatus (col. 4, lines 61-65, col. 6, lines 44-61, Fig.2). It would have been obvious to one having ordinary skill in the art at the time the invention was made to use Setlak's teachings to modify the combined device of Bowker, Hsu and Tamori by using plurality of parallel processors in order to increase the overall efficiency and operating speed of the apparatus.

As to claim 57, refer to claim 50 rejection.

Allowable Subject Matter

12. Claims 16, 22, 46-49 are allowed.

13. Claims 13, 23, 51, 53-55 would be allowable if rewritten to overcome the rejection(s) under 35 U.S.C. 112, first paragraph, set forth in this Office action and to include all of the limitations of the base claim and any intervening claims.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Samir A. Ahmed whose telephone number is 703-305-9870. The examiner can normally be reached on Mon-Fri 8:30am-6:00pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Amelia Au can be reached on 703-308-6604. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

SA

SAMIR AHMED
PRIMARY EXAMINER